UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,759	10/02/2003	Rakesh Dugad	Flarion-57APP (85)	6617

26479 7590 04/20/2007		EXAMINER
STRAUB & POKOTYLO		FAROUL, FARAH
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BLDG. B, 2ND FLOOR	ART UNIT	PAPER NUMBER
TINTON FALLS, NJ 07724	2616	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

	Application No.	Applicant(s)
Office Action Summary	10/678,759	DUGAD ET AL.
	Examiner	Art Unit	
	Farah Faroul	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *5/5/2004*.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____ .

DETAILED ACTION

1.   The following Office Action is based on Application No. 10/678,759 filed on

October 2, 2003, claiming priority from a US provisional application filed October 3,

2002 and having claims 1-40 and Figures 1-23.

Specification

2.   The abstract of the disclosure is objected to because the acronyms WT and BS

need to be changed to Wireless Terminal (WT) and Base Station (BS) in all lines cited.

Correction is required. See MPEP § 608.01(b).

Claim Objections

3.   Claims 9, 21 and 32 are objected to because of the following informalities:

It is suggested that applicant changes the phrase "correspond to" in line 2 of

claim 9 to "corresponding to".

It is suggested that applicant add the word "to" after the word "corresponding" in

line 2 of claim 21.

It is suggested that applicant remove the letter "s" in the word "numbers" in claim

32 to match the limitation "the number of data units" of the prior claims.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

Claims 3-4 and 6-40 are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention.

Claim 3 recites the limitation "said group of requests" in line 2. There is

insufficient antecedent basis for this limitation in the claim. It is suggested that applicant

changes the limitation to "said group of transmission requests" to match the limitation of

the prior claims.

Claim 3 recites the limitation "the first request" in line 3. There is insufficient

antecedent basis for this limitation in the claim. It is suggested that applicant changes

the limitation to " the first transmission request" as stated in claim 1.

Claim 4 recites the limitation "said group of requests" in line 1. There is

insufficient antecedent basis for this limitation in the claim. It is suggested that applicant

changes the limitation to "said group of transmission requests" to match the limitation of

the prior claims.

Claim 6 recites the limitation "said plurality of priority levels" in lines 2-3. There is

insufficient antecedent basis for this limitation in the claim. Applicant needs to change

the limitation to "said plurality of different transmission priority levels" as stated in claim

1.

Claim 7 is subsequently rejected as being dependent on a rejected base claim.

Claim 8 recites the limitation "said plurality of priority levels" in lines 2-3. There is

insufficient antecedent basis for this limitation in the claim. Applicant needs to change

the limitation to "said plurality of different transmission priority levels" as stated in claim

1.

Claim 9 recites the limitation "said plurality of priority levels" in lines 2-3. There is

insufficient antecedent basis for this limitation in the claim. Applicant needs to change

the limitation to "said plurality of different transmission priority levels" as stated in claim

1.

Claim 9 recites the limitation "the first and second queues" in line 2. There is

insufficient antecedent basis for this limitation in the claim. Applicant is required to

change the limitation to "the first and second set of queue information" as stated in base

claims 1 and 5.

Claim 10 recites the limitation "said first table" in line 4. There is insufficient

antecedent basis for this limitation in the claim. The limitation needs to be changed to

"said first quantization table" as stated in line 2 of the claim.

Claim 11 recites the limitation "said data unit information" in line 2. There is no

antecedent basis for this limitation in the claim.

Claim 11 recites the limitation "the first and second queues" in line 3. There is

insufficient antecedent basis for this limitation in the claim. Applicant is required to

change the limitation to "the first and second set of queue information" as stated in base

claims 1 and 5.

Claim 11 recites the limitation "said first and second requests" in line 2. There is

insufficient antecedent basis for this limitation in the claim. The limitation needs to be

changed to "said first and second transmission requests" as recited in claims 1 and 2.

Claim 12 recites the limitation "said group of requests" in line 2. There is insufficient antecedent basis for this limitation in the claim. It is suggested that applicant changes the limitation to "said group of transmission requests" to match the limitation of the prior claims.

Claim 13 recites the limitation "said first and second requests" in line 1. There is insufficient antecedent basis for this limitation in the claim. The limitation needs to be changed to "said first and second transmission requests" as recited in claims 1 and 2.

Claim 13 recites the limitation "the first request" in line 2. There is insufficient antecedent basis for this limitation in the claim. It is suggested that applicant changes the limitation to " the first transmission request" as stated in claim 1.

Claim 13 recites the limitation "the second request message" in lines 2-3. There is no antecedent basis for this limitation in the claim.

Claim 14 recites the limitation "said group of requests" in lines 1 and 3. There is insufficient antecedent basis for this limitation in the claim. It is suggested that applicant changes the limitation to "said group of transmission requests" to match the limitation of the prior claims.

Claim 14 recites the limitation "said first one of said plurality of different transmission priority levels" in lines 3-4 and 7. There is no antecedent basis for this limitation in the claim.

Claim 16 recites the limitation "said maintained queue information" in line 5. There is no antecedent basis for this limitation in the claim.

Claims 17-27 recite the limitation "the device" in line 1. There is no antecedent basis for this limitation in the claim. Applicant needs to change the limitation to "the wireless communications device" as stated in base claim 16.

Claim 17 recites the limitation "said group of requests" in line 2. There is insufficient antecedent basis for this limitation in the claim. It is suggested that applicant changes the limitation to "said group of transmission requests" to match the limitation of the prior claims.

Claim 17 recites the limitation "said means for generating a group of transmission requests" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim. The limitation needs to be changed to "said means for periodically generating a group of transmission requests".

Claim 17 recites the limitation "the first request" in line. There is insufficient antecedent basis for this limitation in the claim. The limitation needs to be changed to "the first transmission request".

Claim 18 recites the limitation "said means for generating" in line 1. There is insufficient antecedent basis for this limitation in the claim. The limitation should be changed to "said means for periodically generating".

Claim 18 recites the limitation "said group of requests" in line 1. There is insufficient antecedent basis for this limitation in the claim. The limitation should be changed to "said group of transmission requests" as stated in claim 16.

Claim 19 recites the limitation "said plurality of priority levels" in line 4. There is insufficient antecedent basis for this limitation in the claim. The limitation should be changed to "said plurality of different transmission priority levels" as stated in claim 16.

Claim 20 recites the limitation "said plurality of priority levels" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim. The limitation should be changed to "said plurality of different transmission priority levels" as stated in claim 16.

Claim 21 recites the limitation "said plurality of priority levels" in line 4. There is insufficient antecedent basis for this limitation in the claim. The limitation should be changed to "said plurality of different transmission priority levels" as stated in claim 16.

Claim 22 recites the limitation "said plurality of priority levels" in line 3-4. There is insufficient antecedent basis for this limitation in the claim. The limitation should be changed to "said plurality of different transmission priority levels" as stated in claim 16.

Claim 23 recites the limitation "said priority levels" in line 3. There is insufficient antecedent basis for this limitation in the claim. The limitation should be changed to "said plurality of different transmission priority levels" as stated in claim 16.

Claim 23 recites the limitation "said means for generating a group of requests" in line 1. There is insufficient antecedent basis for this limitation in the claim. The limitation should be changed to "said means for periodically generating a group of transmission requests" as stated in claim 16.

Claim 24 recites the limitation "said first table" in line 4. There is insufficient antecedent basis for this limitation in the claim. The limitation should be changed to "said first quantization table" as stated in line 2 of the claim.

Claim 25 recites the limitation "said first and second queues" in line 3. There is insufficient antecedent basis for this limitation in the claim. The limitation should be changed to "said first and second set of queue information" as stated in base claims 16 and 19.

Claim 25 recites the limitation "said first and second requests" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim. The limitation should be changed to "said first and second transmission requests" as stated in claim 16.

Claim 26 recites the limitation "said group of requests" in line 1. There is insufficient antecedent basis for this limitation in the claim. The limitation should be changed to "said group of transmission requests" as stated in claim 16.

Claim 27 recites the limitation "said first and second requests" in line 1. There is insufficient antecedent basis for this limitation in the claim. The limitation should be changed to "said first and second transmission requests" as stated in claim 16.

Claim 27 recites the limitation "the first request" in line 2. There is insufficient antecedent basis for this limitation in the claim. The limitation should be changed to "the first transmission request" as stated in claim 16.

Claim 27 recites the limitation "the second request message" in lines 2-3. There is no antecedent basis for this limitation in the claim.

Claim 28 recites the limitation "said transmission priority levels" in line 11. There is no antecedent basis for this limitation in the claim.

Claim 29 recites the limitation "said plurality of priority levels" in line 2. There is insufficient no basis for this limitation in the claim.

Claim 30 is subsequently rejected for being dependent on a rejected base claim.

Claim 31 recites the limitation "said priority levels" in line 2. There is no antecedent basis for this limitation in the claim.

Claim 31 recites the limitation "said one of said priority levels" in line 3. There is no antecedent basis for this limitation in the claim.

Claim 32 recites the limitation "said one of said priority levels" in line 3. There is no antecedent basis for this limitation in the claim.

Claim 33 recites the limitation "said priority levels" in line 2. There is no antecedent basis for this limitation in the claim.

Claims 34-35 are subsequently rejected for being dependent on a rejected base claim.

Claim 36 recites the limitation "said transmission priority levels" in lines 11-12. There is no antecedent basis for this limitation in the claim.

Claim 37 recites the limitation "said plurality of priority levels" in lines 3-4. There is no antecedent basis for this limitation in the claim.

Claim 38 recites the limitation "said priority levels" in lines 3-4. There is no antecedent basis for this limitation in the claim.

Claim 38 recites the limitation "said one of said priority levels" in line 5. There is no antecedent basis for this limitation in the claim.

Claim 39 recites the limitation "said one of said priority levels" in line 4. There is no antecedent basis for this limitation in the claim.

Claim 40 recites the limitation "said priority levels" in lines 3-4. There is no

antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating
        obviousness or nonobviousness.

Claims 1-4, 6-7, 16-18, 20-21, 28 and 36 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Agarwala et al. (US 6,868, 087 B1) and Struhsaker et al. (US

7,002,929 B1) in view of Crisler et al. (5,515,379) (reference disclosed by applicant).

For claims 1-2, 16, 28 and 36, Agarwala discloses maintaining a first set of

queue information indicating for each of a plurality of different transmission priority

levels a number of data units to be transmitted (column 4, lines 28-54 wherein queue

manager 102 may be split into multiple queue associated with different priority levels).

Argawala teaches the entire claimed invention except for periodically generating

a group of transmission requests over time as a function of the maintained queue

information and a first transmission request specifying an absolute number of data units

to be transmitted for a first one of the plurality of different transmission priority levels

and further includes a second transmission request.

Struhsaker et al. discloses periodically generating a group of transmission

requests over time as a function of the maintained queue information (column 14, lines

29-53, column 10, lines 14-28 wherein traffic requirements requests from several

groups of devices are generated).

Thus, it would have been obvious to someone of ordinary skill in the art to

combine the communication network of Agarwala with the queue management method

of Strusaker. The queue management method of Struhsaker is implemented into the

communication network of Agarwala by generating a group of requests to maintain the

queue traffic. The motivation to combine the queue management method of Strusaker

with the communication network of Agarwala is that it provides an efficient traffic

management mechanism.

Agarwala and Struhsaker disclose the entire claimed invention except a first

transmission request specifying an absolute number of data units to be transmitted for a

first one of the plurality of different transmission priority levels and further includes a

second transmission request.

Crisler, from the same or similar field of endeavor, teaches the first or second

transmission request specifying the amount of time slots needed for the amount of time

frames to be transmitted (column 4, lines 29-67).

Thus, it would have been obvious to someone of ordinary skill in the art to

combine the communication network of Agarwala and Struhsaker with the traffic

management method of Crisler. The traffic management method of Crisler can be

implemented into the network of Agarwala and Struhsaker by including the amount of

data units in the channel allocation request. The motivation to combine the traffic

management method of Crisler with the communication network of Agarwala and

Struhsaker is that it provides an efficient uplink channel allocation mechanism.

For claims 3 and 17, Agarwala discloses incorporating in the first request a

number of data units to be transmitted corresponding to the highest transmission priority

level having a non-zero number of data units to be transmitted as indicated by the set of

queue information (column 5, lines 24-45 wherein the channel request with the highest

priority level is allocated).

For claim 4 and 18, Crisler discloses incorporating a second number of data units

to be transmitted corresponding to another transmission priority level into the first

transmission request (column 4, lines 29-67 wherein the first or second transmission

request specifying the amount of time slots needed for the amount of time frames to be

transmitted).

For claims 6-7 and 20-21, Crisler discloses the second transmission request

includes a relative number of data units corresponding to one of the plurality of priority

levels to be transmitted, wherein the relative number in an estimated in the first queue

information maintained by the wireless communications device (column 4, lines 29-67,

column 5, lines 23-62 wherein the amount of time frames requested corresponds to the

priority levels).

6.   Claims 5 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Crisler; Agarwala and Struhsaker as applied to claims 1-4, 16-18, 20-21, 28 and 36

above, and further in view of Spinar et al. (US 7,006,530 B2).

For claims 5 and 19, Agarwala, Crisler and Struhsaker disclose the entire

claimed invention except maintaining a second set of queue information from an

estimate of the base station's estimate.

Spinar, from the same or similar field of endeavor, teaches queuing information

from base station whereby the base station polls users to allocate bandwidth (column 3,

lines 56-67).

Thus, it would have been obvious to someone of ordinary skill in the art to

combine the modified system of Agarwala, Crisler and Struhsaker with the bandwidth

alllocation method of Spinar. The bandwidth allocation method of Spinar can be

implemented into the network of Agarwala, Crisler and Struhsaker by including the

amount of data units in the channel allocation request. The motivation to combine the

bandwidth allocation method of Spinar with the modified system of Agarwala, Crisler

and Struhsaker is that it provides an efficient uplink channel allocation mechanism.

Conclusion

7.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. Connors (US 2003/0016649 A1) and Hughes et al. (US

6,747,971 B1) are cited to show systems pertinent to applicant's invention. Connors

discloses a resource allocation method with a resource metric and Hughes discloses a

scheduling method to determine priority between multicast and unicast traffic.

8.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Farah Faroul whose telephone number is 571-270-1421.

The examiner can normally be reached on Monday - Friday 6:30 AM - 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Chau Nguyen can be reached on 571-272-3126. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

F. Faroul

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